

1021-1511

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Mr. Thomas Lennan  
McLaughlin Gormley King Company  
8810 Tenth Avenue North  
Minneapolis, MN 55427

NOV - 7 2012

Dear Mr. Lennan:

Subject: Amendment: Add misting system directions and revise mixing charts for non-crop uses  
MGK PBO 8-E  
EPA Reg. No. 1021-1511  
Your submission dated August 15, 2012

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) section 3(c)(7)(a), is acceptable and a stamped copy of the label is enclosed for your records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10), or durably marked on the container itself.

If you have any questions regarding this letter, please contact Dana Pilitt, PhD of my staff at (703) 305-7071 or via e-mail at [pilitt.dana@epa.gov](mailto:pilitt.dana@epa.gov).

Sincerely,

Richard Gebken  
Product Manager 10  
Insecticide Branch  
Registration Division (7505P)



Net Contents: \_\_\_\_\_

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin eyes or clothing. Causes moderate eye irritation. Wear goggles or face shields. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are made of barrier laminate, nitrile or neoprene rubber, or viton. If you want more options, follow the instruction for category E on an EPA chemical-resistance category section chart. Mixers, loaders, applicators and other handlers must wear the following: long-sleeved shirt and long pants; chemical-resistant gloves such as Barrier Laminate, Neoprene Rubber, Nitrile Rubber, or Viton; and shoes and socks.

In addition to the above PPE, mixers and loaders supporting aerial applications to forests and/or applicators using a high pressure handwand in an enclosed area must wear at least a NIOSH-approved respirator with:

- a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C; or
- any N, R, P, or HE filter.

In addition to the above PPE, applicators using hand held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with:

- a dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C); or
- a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G); or
- a cartridge or canister with any N, R, P or HE filter.

See engineering controls for additional requirements.

**User Safety Requirements:**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

**Engineering Controls:**

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

**USER SAFETY RECOMMENDATIONS**

**User should:**

- Wash hands with plenty of soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through runoff. This product has a potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protection equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or Tribe, consult the agency responsible for pesticide regulation.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as soil or water, is:

- Coveralls, shoes plus socks, and
- Chemical-resistant gloves made of any waterproof material.

STRUCTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR, Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter until sprays have dried.

Do not enter or allow others to enter until vapors, mists, and aerosols have dispersed, and the treated area has been thoroughly ventilated.

Except when applying directly on animals or animal premises, do not apply this product in a way that will contact workers or other persons either directly or through drift.

Except when applying directly on animal or animal premises, only protected handlers may be in the area during application.

This product is an emulsifiable concentrate for use in a tank mix with insecticides and acaricides to aid in improving the control of insects and mites. MGK® PBO 8E is a synergist that aids in blocking oxidative resistance that may develop in insects and mites and has no insecticidal properties of its own.

GENERAL PRECAUTIONS AND USE RESTRICTIONS

- Do not apply this product in a way that will contact adults, children, or pets, either directly or indirectly through drift. Only protected handlers may be in the area during application.
- Do not wet plants to the point of runoff or drip.
- Do not use treated article before it is dry.
- Do not apply directly to water, storm drains, or drainage ditches. To prevent product run-off, do not over water the treated area(s) or apply when heavy rain is expected. Rinse applicator over lawn or garden area only.
- Do not remain in treated area. Exit area immediately and remain outside the treated area until aerosols, vapors, and/or mists have dispersed.
- Always test final spray solution in an inconspicuous area prior to use as some fibers or surfaces may be adversely affected by an application of this, or any liquid product.
- Do not use in aircraft cabins except in compliance with PR Notice 96-3.

- In absence of specific data or experience on growing plants, trees and ornamentals (outdoors, in greenhouses or indoors), it is recommended that tank-mixes with MGK® PBO 8-E be tested for any phytotoxicity on a representative sample of the growing plants prior to use
- Do not tank mix PBO 8E with any product having label prohibitions against such mixing.

**Application Types:**

MGK® PBO-8E may be applied via ground application units, hand-held sprayers, power sprayers, backpack sprayers, misting systems, foggers and ULV applicators, and chemigation.

Indoor and Outdoor Non-Crop Mixing Chart:

MGK® PBO 8-E can be tank mixed with any insecticide product unless prohibited by that insecticides label.

THE PURPOSE OF THIS CHART IS SOLELY TO RECOMMEND THE RATE OF MGK® PBO 8-E PER GALLON OF WATER. PLEASE REFER TO CURRENT TANK MIX PARTNER LABEL TO DETERMINE THE RATE OF THAT SPECIFIC PRODUCT THAT IS APPROPRIATE FOR YOUR APPLICATION.

Application Type	Recommended MGK PBO 8-E Mix Rate per gallon	% Active	Maximum Single Application	
Surface General and Crack & Crevice or Spot	Light Infestation	0.5 fl oz	Refer to the max application restriction for each use direction below.	
	↕	1.0 fl oz		0.71%
		1.5 fl oz		1.07%
		Heavy Infestation		2.0 fl oz
Space Spray	Light Infestation	0.25 fl oz	Refer to the max application restriction for each use direction below.	
	↕	0.50 fl oz		0.35%
		0.75 fl oz		0.53%
		Heavy Infestation		1.00 fl oz

**STRUCTURAL USE DIRECTIONS:**

**MGK® PBO 8-E STRUCTURAL USE RATES and RESTRICTIONS:**

After treatment, do not allow children and pets into treated areas until spray has dried.

When used as a space spray do not exceed 0.4 fl. oz. of MGK PBO 8-E per 1000 cu. ft. of space treated.

When used as a crack and crevice, broadcast surface spray or spot treatment do not exceed 8.0 fl. oz of MGK PBO 8\_E per 1000 sq. ft. of space treated.

**WHEN TANK MIXING, ALWAYS FOLLOW THE MOST RESTRICTIVE LABELING OF ALL PRODUCTS IN THE MIXTURE.**

MGK® PBO 8-E MAY BE USED IN A TANK MIX WITH INSECTICIDES LABELED FOR USE IN THE FOLLOWING AREAS OR USE PATTERNS:

**RESIDENTIAL DWELLING AND COMMERCIAL, INSTITUTIONAL INDOOR SITES:** Sites such as Homes, Multiple Unit Housing, Hotels, Schools, Restaurants, Food Processing Facilities, Food Storage and Warehousing, Bakeries, Residential Facilities, Healthcare Facilities, Warehouses, Office Buildings, Factories, Home Exteriors, and Industrial Facilities.

Do not apply more than 1 time per day.

Do not make space spray application when facility is in operation.

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Remove or cover exposed food and drinking water before application.

Remove or cover dishes, utensils, food processing equipment and food preparation surfaces, or wash them with a suitable detergent and rinse with potable water before use.

Direct application to food contact surfaces is prohibited.

Ventilate well prior to reentry or reoccupation.

Allow spray to dry prior to reentry.

**NON-FOOD AREAS:** MGK® PBO-8E may be used to treat nonfood areas. Nonfood areas include (but not limited to) areas such as garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets, and storage (after canning or bottling).

**TREATMENTS IN FOOD HANDLING ESTABLISHMENTS** (Places other than private residences in which food is held, processed, prepared or served):

**FOOD AREAS:** MGK® PBO 8-E can be used to treat food areas of food handling establishments, restaurants, or other areas where foods are commercially prepared or served.

**FOOD STORED IN BAGS:** MGK® PBO 8-E can be used as a Space spray made to the surfaces of bags of stored food products. Do not exceed 0.4 fl. oz. MGK PBO 8E per 1,000 cubic ft. of spaced treated.

**GENERAL OUTDOOR SITES:** Sites such as Non-Agricultural rights of way, Commercial, Industrial and Institutional Premises and Outdoor Eating Establishments. Including Parks, Landscape, Turf, Home Exteriors, Buildings, Industrial Facilities, Equipment.

When used as a broadcast surface spray, do not exceed 1.2 fl. oz of MGK PBO 8-E per 1000 sq. ft. treated.

When used as a crack and crevice or spot surface treatment, do not exceed 8.0 fl. oz. of MGK PBO 8-E per 1000 sq.ft.

**OUTDOOR ORNAMENTAL AND LAWNS:** Sites such as Trees, Shrubs, Flowers, Foliage Plants, Lawns, Yards, Turf Grass, Golf Courses, Parks, Landscape.

When used as a broadcast surface application, do not exceed 0.32 fl. oz. of MGK PBO 8-E per 1000 sq. ft.

When used as a crack and crevice or spot surface treatment (including applications for fire ants or turf diagnostic aid), do not exceed 8.0 fl. oz of MGK PBO 8-E per 1000 sq. ft..

**OUTDOOR AGRICULTURAL PREMISES:**

When used as a broadcast surface spray, do not exceed 0.32 fl. oz. of MGK PBO 8-E per 1000 sq. ft. treated.

For growing plants that will be consumed as food, do not exceed 0.384 fl. oz (2.3 teaspoons) of MGK® PBO 8-E per 1000 sq. ft treated.

For crack and crevice, or spot surface sprays (including applications for fire ant applications or turf diagnostic aid), do not exceed 8.0 fl. oz. of MGK PBO 8-E per 1000 sq. ft. treated.

**PET PREMISE TREATMENT:**

May be used in a space spray application for pet premises. Do not exceed 0.5 fl. oz. of MGK PBO 8-E per 1000 cu. ft. treated.

For broadcast surface sprays, or crack and crevice or spot surface treatments, do not exceed 8.0 fl. oz. of MGK PBO 8-E per 1000 sq. ft. treated.

**DIRECT APPLICATION TO LIVESTOCK, DAIRY AND POULTRY ANIMALS:**

MGK® PBO 8-E may be tank mixed with insecticides labeled for application directly to Non-domestic animals (including lactating dairy animals, meat and poultry animals). Do not apply microencapsulated product to lactating or food animals.

**LIVESTOCK, DAIRY AND POULTRY PRODUCTION FACILITIES AND PREMISES:**

MGK® PBO 8-E may be tank mixed with insecticides labeled for use in and around Livestock, Dairy and Poultry Production Facilities, Indoor Agricultural Premises, Commercial Animal Housing and Equipment to improve control of flying and crawling insects.

When used in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from spray and from dead or falling insects.

Remove or cover milking utensils before application. Wash teats of animals before milking.



## For Use on Crops

**WHEN TANK MIXING, ALWAYS FOLLOW THE MOST RESTRICTIVE LABELING OF ALL PRODUCTS IN THE MIXTURE.**

MGK® PBO 8-E can be tank mixed with any insecticide product unless prohibited by that insecticides label.

MGK® PBO 8-E may be used in a tank mix with an insecticide or acaricide on GROWING CROPS (OUTDOORS AND IN GREENHOUSES), as well as in insecticide applications to Dormant Crops.

### SPRAY DRIFT MANAGEMENT FOR AGRICULTURE CROPS:

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interactions of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not apply at wind speeds greater than 10 mph (16 km/h) at the application site. Do not make any type of application into temperature inversions. Apply as a medium or coarser spray (ASABE standard 572).

### Additional requirements for aerial applications:

Do not release spray at a height greater than 10 feet above the ground or crop canopy.

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Aerial applicators must consider flight speed and nozzle orientation in determining droplet size. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

### Additional requirements for ground applications:

During ground applications do not release spray at a height greater than 4 feet above the ground or crop canopy.

### Additional requirements for airblast applications:

During airblast applications direct sprays into the canopy. Turn off outward pointing nozzles at row ends and when spraying outer rows.

### **CROP USE RATES and RESTRICTIONS:**

<b>Food Crops grown outdoors or in greenhouses in agricultural settings</b>		
	Maximum Use Rate	Use Restrictions
Field and Orchard Crops	8.0 fl. oz. per acre or 0.20 fl. oz. per 1000 sq. ft.	<ul style="list-style-type: none"> <li>Do not apply more than 10 times per season.</li> <li>Do not reapply within 3 days except under extreme pest pressure.</li> <li>In case of extreme pest pressure do not reapply within 24 hours.</li> <li>Do not apply to cotton within 14 days of seed harvest.</li> <li>A 10-day water hold is required for all pyrethrins applications when rice fields are flooded.</li> </ul>
Hydroponically grown crops	1.0 ppm ai in water	
Greenhouse Space Sprays	0.22 fl. oz. per 10,000 cubic feet	
Greenhouse Surface Sprays	0.20 fl. oz. per 1000 sq. ft.	
<b>Greenhouse Grown Ornamental, Flowering and Foliage Plants</b>		
	Maximum Use Rate	Use Restrictions
Surface Applications	0.58 fl. oz per 1000 sq.ft. or 24.0 fl. oz. per acre	Do not apply more than 1 time per day
Space Sprays	0.67 fl. oz. per 10000 cubic feet	
Forestry	20 fl. oz. per acre	
Sod Farms	16 fl. oz. per acre	

Observing the directions and volume of water on the insecticide label, tank-mix at a rate of 2 to 8 fluid ounces of MGK® PBO 8-E per acre. 8 fluid ounces (1/2 pint) will provide 0.5 lb of MGK® PBO 8-E active ingredient.

Prior to tank-mix, a compatibility test should be done using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture. The tank mix application should conform to accepted use precautions and directions for both products.

Mix MGK® PBO 8-E with an insecticide based on the amount of active ingredient. Most insecticides are synergized at the ratio range of 1 to 10 parts MGK® PBO 8-E's active ingredient to 1 part of an insecticide's active ingredient.

One fluid ounce of MGK® PBO 8-E contains 0.0625 pounds of active ingredient. To calculate the Fluid Ounces of MGK® PBO 8-E to use with a given insecticide, first calculate the amount of active ingredient of the insecticide to be used (in pounds), multiply that amount times the ratio of MGK® PBO 8-E desired (between 1 and 10), then divide that amount by 0.0625.

Equation: 
$$\frac{(\text{lbs insecticide a.i.} \times \text{desired ratio of MGK® PBO 8-E})}{0.0625} = \text{Fluid Ounces of MGK® PBO 8-E required}$$

In absence of specific data or experience on growing crops and ornamentals (outdoors, in greenhouses or indoors), it is recommended that tank-mixes with MGK® PBO 8-E be tested for any phytotoxicity on a sample of the crop or growing plants prior to use.

### Crop Tank Mix Rate Chart:

THE PURPOSE OF THIS CHART IS SOLELY TO RECOMMEND THE RATE OF MGK PBO 8-E PER VOLUME OF TANKMIX PARTNER. THIS IS NOT A RECOMMENDATION OF TANK-MIX PARTNER USE RATES. PLEASE REFER TO THE MOST CURRENT TANK-MIX PARTNER LABEL TO DETERMINE THE RATE OF THAT SPECIFIC PRODUCT THAT IS APPROPRIATE FOR YOUR APPLICATION.

Tank mix partner Chemical name Example Brand name	IF Tank Mix Partner Rate per acre is:	THEN MGK® PBO 8-E Rate per acre is:	
		Recommended	Maximum
Abamectin 2% a.i. Agri-mek® 0.15 EC	5 to 10 fl. oz.	2.0 fl. oz.	8 fl. oz.
	16 fl. oz.	3.0 fl. oz.	
	20 fl. oz.	4.0 fl. oz.	
β-cyfluthrin 12.7% a. i. Baythroid® XL	0.8 fl. oz. to 1.6 fl. oz.	2.0 fl. oz.	8 fl. oz.
	1.8 fl. oz. to 2.4 fl. oz.	3.0 fl. oz.	
	2.8 fl. oz.	3.5 fl. oz.	
	3.2 fl. oz.	4 fl. oz.	
	6.4 fl. oz.	8 fl. oz.	
Cyfluthrin 25% a.i. Baythroid® 2	0.80 fl. oz.	2.0 fl. oz.	8 fl. oz.
	1.6 fl. oz.	4.0 fl. oz.	
	2.0 fl. oz.	5.0 fl. oz.	
	2.8 fl. oz.	7.0 fl. oz.	
	3.2 fl. oz. to 6.4 fl. oz.	8.0 fl. oz.	
Cyfluthrin 20% a.i. Renounce® 20 WP	1.0 oz.	2 fl. oz.	8 fl. oz.
	2.0 oz	4 fl. oz.	
	2.5 oz.	5 fl. oz.	
	3.0 oz.	6 fl. oz.	
	3.5 oz (259 ml/Ha)	7 fl. oz. (518 ml/Ha)	
	4.0 to 8.0 oz.	8 fl. oz.	



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Pounce® 25WP	6.4 oz. to 32.0 fl. oz.	8.0 fl. oz.	
Zeta-cypermethrin 9.6% a.i. Mustang Max®	1.28 fl. oz. to 1.92 fl. oz.	2.0 fl. oz.	8.0 fl. oz.
	2.24 fl. oz. to 3.0 fl. oz.	3.0 fl. oz.	
	3.2 fl. oz. to 4.0 fl. oz.	4.0 fl. oz.	

Zeta-cypermethrin 18.1% a.i. Fury®	1.4 fl. oz.	2.6 fl. oz.	8.0 fl. oz.
	1.9 fl. oz.	3.5 fl. oz.	
	2.0 fl. oz.	3.8 fl. oz.	
	2.4 fl. oz.	4.5 fl. oz.	
	2.8 fl. oz.	5.3 fl. oz.	
	3.0 fl. oz.	5.6 fl. oz.	
	3.4 fl. oz.	6.4 fl. oz.	
	4.3 fl. oz.	8.0 fl. oz.	

**CHEMIGATION USE DIRECTIONS:**

Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for the operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the pump motor stops. The irrigation line or water pump must include a functional pressure valve which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must be a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of more dilute suspension per unit of time.

